DOCUMENT RESUME

ED 249 499 CS 208 589

AUTHOR Lansing, Margaret L.
TITLE Computers in Composition: A Bibliography of Research and Practice.
PUB DATE 84
NOTE 22p.
PUB TYPE Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cognitive Processes; *Computer Assisted Instruction; *Computer Software; English Instruction; Higher Education; Humanities; Microcomputers; *Revision (Written Composition); Secondary Education; *Word Processing; Writing Improvement; *Writing Instruction; Writing Skills
IDENTIFIERS *Rhetorical Invention; Software Evaluation

ABSTRACT

Designed to help classroom teachers discover how to use computers effectively in teaching writing, this annotated bibliography contains citations of articles that have appeared in education journals, books, and the ERIC system. Among the topics covered in the more than 50 articles cited are the following: (1) feedback programs for individualized analysis of writing; (2) computers, creativity, and composition; (3) word processing as an aid to revision; (4) software applicable to the needs of student writers; (5) research on word processing that is relevant to the teaching of composition; (6) computing as a mode of invention; (7) the computer as stylus and audience; (8) selecting microcomputer software for the teaching of English; (9) problems of computer assisted instruction in composition; (10) computers and essay grading; (11) textual analysis with computers; (12) computer aided review lessons in English grammar and spelling; (13) computers and poetry; (14) hypothesis testing with computer assisted instruction; (15) computer applications for humanistic education; and (16) teaching stylistic simplicity with a computerized readability formula. (FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED249499

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Margaret L. Lansing

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Computers in Composition:

A Bibliography of Research and Practice

Margaret L. Lansing
Oak Creek Senior High School
340 East Puetz Road
Oak Creek, Wisconsin 53154

Foreword

As humanists, we can no longer afford the luxury of asking whether we will use computers in our classes; instead we must ask how we can use them effectively. The following bibliography of research and classroom practices begins to answer this question.

Most of the entries describe current research, teaching strategies, or software development. However, I have also included some articles that are more than five years old because they are relevant to recent developments.

In some cases, a paper was published through ERIC Document Reproduction Service and later rewritten and published in a journal. I have included both articles without cross references because the relationships are obvious. Those few cross references that are included indicate articles that should be read together.

Generally, computer-related articles in popular magazines lack the insight that teachers need in order to apply the new technology to our subject and students. Consequently, I have not included such articles. For the same reason, I have eliminated two popular publications: Writing in the Computer Age by Andrew Pluegelman and Jeremy Hewes and Writing With a Word Processor by William Zinsser. While these books do alert the novice to some advantages and disadvantages of word processors, they do not address the issue of the student as a writer.

The research and practices presented in this bibliography are concerned with the student as he learns to write.

© 1984 Margaret L. Lansing

CS 208 589

Computers in Composition:

A Bibliography of Research and Practice

Anandam, Kamala and others. RSVP: Feedback Programs for Individualized Analysis of Writing. ERIC ED 191 511.

RSVP (Response System with Variable Prescriptions) provides students with an individualized analysis of their essays printed in the form of a letter. During the winter term in 1978, six freshman composition classes and three developmental writing classes field-tested the program in five community colleges in Florida. An equal number of classes served as control groups. During the study, instructors of the CAI sections read students' papers, marked computer cards indicating the errors that needed prescriptions, and distributed the RSVP-produced letters. Most students and five of the nine instructors responded positively to questionnaires concerning RSVP. However, tests showed no significant differences between RSVP and non-RSVP classes.

Arms, Valerie M. "Computers, Creativity, and Composition." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 4-7.

Ms. Arms' research focused on using the computer to teach the process of composition: prewriting, writing, and revising. First she identified the fundamental problems involved in teaching composition as process, and then she developed software called Create and Format. Create, which focuses on prewriting, uses a series of questions to help students generate ideas. Format allows students to begin writing with little knowledge of the computer. Screen prompts help students see relationships between the parts and whole essay. Finally, the AFCAD Editor--"a powerful tool for manipulating text" (6)--helps students find and correct grammar errors. Students have told her that they make changes because revision is easy with the text editor.

_____. "Creating and Recreating." College Composition and Communication, 34, No. 3 (October 1983), 355-358.

Create and Recreate, two programs developed by Ms. Arms, focus on invention and revision respectively. Create asks twenty questions to help students draft their papers while Recreate, which encourages global revision, asks questions about the structure and organization of the paper. Students answer Recreate's questions from memory and then compare their responses to the actual paper. Ms. Arms openly discusses the limitations of the computer and admits that the questions used in these two programs could be mimeographed. However, while students tell her that they run the programs because they are fun, she has "never had to give a student a second mimeographed sheet because he thought it was fun" (37). Finally, Ms. Arms offers guidelines for choosing a computer and for writing and using software to teach composition.

Auten, Anne. "Computers in English: How and Why." English Journal, 73, No. 1 (January 1984), 54-56.

Ms. Auten summarizes several papers published through ERIC: Ellen Nold's development of Sage and Arrowroot, Kathy Jaycox's paper on the status of CAI in the English classroom, William Wresch's writing programs, Richard Collier's report on text editing, and Hugh Burns' program to stimulate invention. These reviews inform the secondary teacher about the state of the art.

Bean, John C. "Computerized Word-Processing as an Aid to Revison." College Composition and Communication, 34, No. 2 (May 1983), 146-148.

Funded by the Northwest Area Foundation, Professor Bean conducted a pilot project at Montana State University, Bozeman. Four composition students (volunteers) wrote six papers. Each student entered his initial text into the computer, received a wide print-out to make revisions, entered changes into the computer during the next session, and received another print-out to revise again. Mr. Bean encouraged his subjects to discover and develop ideas during revison, to be concerned with audience, and to refine style. In testimonies students stated that they did more revision than they would have with just paper and pen because they were not burdened with recopying.

Berry, Eleanor. "Word Processors for the Writing Classroom: Taking the Trouble to Choose Wisely." Unpublished Manuscript. University of Wisconsin--Milwaukee, 1984.

Introducing word processing into a composition program costs time and money. Therefore, English instructors should choose equipment and software that will help rather than hinder the writer. Drawing on her personal experience with word processing and her observations of faculty and students working at terminals, she discusses the impact of several features on the writing process: the ease of moving the cursor to any point in the text, the eace of inserting material and moving blocks, the way the screen reformats, and the ability of the screen to keep up with the writer.

Breininger, Lynn J. and Stephen Portch. "A Visit to Professor Cram: Attractive Computer Learning." College Compostion and Communication, 34, No. 3 (October 1983), 358-361.

They had three objectives in designing Professor Cram (Computer Ready Assist to Memory): 1)to make the learning process fun, 2)to teach basic usage rules, and 3)to introduce students to independent CAI. Professor Cram is composed of five units: agreement, sentence fragments, comma splices, and run-on sentences. Students use only those programs that address their weaknesses. Although the programs do not solve writing problems, they do help students review usage rules.

Brenner, Patricia A. "Software Applicable to the Needs of Student Writers." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 26-27.

Ms. Brenner claims that software sophisticated enough to meet the needs of college students has not yet been developed. She considers spelling and grammar programs to be sufficient for remedial work, but states that any real strides in software will address the issues of writers as writers, not as editors. Such software will take into account writing as process as presented by the experts. She calls for programs "to encourage student invention, to stimulate students' interest in audience, and to promote writing as process" (27). (Of course, such work is being done by Hugh Burns, Helen Schwartz, William Wresch, and others.)

Bridwell, Lillian, Parker Johnson, and Stephen Brehe. "Composing and Computers: Case Studies of Experienced Writers." In Writing in Real Time: Modelling Production Processes. Ed. Ann Matsuhashi. New York: Longman, forthcoming.

To understand the effect of word processing on the composing processes of experienced writers, the authors conducted a study involving eight graduate students who had published outside academia. All subjects did four writing tasks: they used pen and paper or a typewriter for the first task and a computer with Wordstar for the the rest. During interviews, the subjects explained their writing rituals. The researchers then classified these writers as discoverers (those who compose to find out what they know), executors (those who plan and then write), or combinations (those who do some of both). Using text and key stroke analysis in addition to interviews, the researchers concluded the following: 1)The subjects were uniformly impressed with the editing capabilities of word processors. 2)The executors were the most satisfied with composing at the terminal while the discoverers were the least satisfied. 3)The most successful subjects used a combination of pen and paper and the computer.

Bridwell, Lillian, Paula Reed Nancarrow, and Donald Ross. "The Writing Process and the Writing Machine: Current Research on Word Processors Relevant to the Teaching of Composition." In New Directions in Composition Research. Ed. Richard Beach and Lillian Bridwell. New York: Guilford Press, 1983, 381-398.

The authors review recent research by Hugh Burns (invention), John Gould (drafting), and Richard Collier (revising). They also discuss Writer's Workbench, RSVP, Lance Miller's EPISTLE, and a host of other projects involving editing. In addition, they comment on the pilot studies at the University of Minnesota.

Bridwell, Lillian, Geoffrey Sirc, and Robert Brooke. "Revising and Computing." In The Acquisition of Written Language: Revision and Response. Ed. Sarah Freedman. Norwood, NJ: Ablex, forthcoming.

This case study involved five students enrolled in a business writing class; all members of this class did their weekly papers on word processors. However, for the first assignment, the subjects used pen and paper.

Interviews and key stroke analysis revealed that two of the five writers expanded revisions to larger units of text and to overall format, two worked to limit revisions, and one struggled to stay the same because she did not master the system. The authors also include survey results of students in other word processing composition classes at the University of Minnesota. The general response has been positive.

Burns, Hugh. A Writer's Tool: Computing as a Mode of Invention. ERIC ED 193 693.

Assuming that students lack insight into their essays because they fail to inquire about their subjects before writing, Hugh Burns developed a CAI program to stimulate rhetorical invention. Using Aristotle's topoi, Burke's pentad, or Young, Becker, and Pike's tagmemic matrix, the computer prompts students to respond to their chosen topics. Then students print their responses so they can use them to prepare their papers.

Burns, Hugh L. and George H. Culp. "Stimulating Invention in English Composition Through Computer-Assisted Instruction." Educational Technology, 20, No. 8 (August 1980), 5-10.

They designed, programmed, tested, and evaluated three CAI modules to stimulate invention through systematic inquiry. Their task involved developing dialogue modules that could explore any subject, encourage students' responses, and achieve continuity between the paper's purpose and invention questions. (The question pools use Aristotle's topics, Burke's pentad, and the Young-Becker-Pike tagmemic matrix.) Seventy-two students assigned to four sections of a second-semester composition class participated in the project. Burns and Culp used pre- and post-tests to determine how much students knew and learned about invention in the CAI and control classes. Results indicate that invention heuristics can help students refine and articulate ideas and that the dialogues can ignore content (not judge responses) and still help students begin to write.

Carlson, Patricia Ann. "Computers and the Composing Process: Some Observations and Implications." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp.70-78.

Ms. Carlson reports on six case studies concerning hand and eye functions while drafting and revising with pen and paper and with a computer. At the Goddard Space Flight Center during the summer of 1982, she collected data using protocol analysis, interviews, and discourse analysis. Her research suggests that the hand is slightly more important during invention while the eyes are dominant during revision. Furthermore, writers who use word processing increase their fluency while prewriting, their appreciation for style, and the ease with which they revise. Finally, she discusses the potential of word processing.

Castner, Bruce A. "Composition and Literature: Learning to Write with Computer Terminals." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp.79-82.

At the University of South Carolina, Mr. Castner offers freshmen a course in literature and critical writing. After studying the short story, poetry, and drama, students write critical papers on computers. Since the terminals are scattered across the campus, he begins instruction with two packets of information: one explains how to use the terminal, and the other lists the text-formatting commands. During the first three weeks of class, he uses one hour per week to introduce the computer; after that, he answers computer-related questions for five to ten minutes each class period. Because he can access each student's account, he can see how many revisions each student has done, and he can comment on the "papers" while they are still in the computer. His observations show that students revise more and turn in carefully edited final copies.

Collier, Richard M. The Influence of Computer-Based Text Editors on the Revision Strategies of Inexperienced Writers. ERIC ED 211 998.

Collier reviews the types of revision, discusses the assumptions inexperienced writers have about revision, and presents his table of revision strategies. His hypothesis states that students who use a text-editor should increase the number and complexity of their revisons, the range of their strategies (based on his table), and the overall effectiveness of this stage of their writing process. Four female nursing students between the ages of 19 and 32 participated in the study.

Each Tuesday for six weeks, these students turned in essays to him; during a three-hour session on the following Friday, they revised and printed their essays. To collect data, he used protocol analysis, videotapes, and student evaluations. He concluded that three of the four subjects made only slight gains in their revision strategies and that superior students tend to succeed while weak students tend to find word processing complicated.

_____. "Reply by Richard M. Collier." College Composition and Communication, 35, No. 1 (February 1984), 94-95.

Collier addresses the criticisms raised by Pufahl (See Pufahl. "Response to... .") and discusses the differences between his research and his classroom instruction.

_____. "The Word Processor and Revision Strategies." College Composition and Communication, 34, No. 2 (May 1983), 149-155.

Collier briefly discusses his study of inexperienced writers revising on word processors and states that his research did not support his hypothesis--students using a computer-based text editor would increase the number and complexity of their revisions. Although he does not include the technical data of his study (See Collier. The Influence of....), he discusses his findings in detail.

Cronnell, Bruce and Ann Humes. Using Microcomputers for Composition Instruction. ERIC ED 203 872.

Believing that microcomputers will improve composition instruction, the authors speculate about how the computer could be used to teach revision, to generate original text, and to arrange material. Since so much research has been done since 1981, this paper has limited value.

Daiute, Colette A. "The Computer as Stylus and Audience." College Composition and Communication, 34, No.2 (May 1983), 134-145.

Ms. Daiute discusses how the word processor can help writers overcome some of the physical and psychological constraints associated with pen and paper writing.

According to Ms. Daiute, some writers suffer physical discomfort and/or pain while writing and revising; consequently, they do little revision. And some writers have difficulty remembering what they want to say when they write. Because the word processor removes some of the physical pain and because it responds rapidly to the writer, the word processor offers a solution to these and similar problems. This article focuses on theory.

Freese, C. Denny and Larry Adams. "Word Processing in College Composition (or The Direct Use of the Microcomputer in Teaching College Composition)." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 202-203.

Freese and Adams identify eight basic assumptions of composition instructors. They plan to create a teaching model using questions that address these assumptions. The three basic questions they will attempt to answer concern how achievement is affected by computers, how students perceive the new student-teacher relationship, and how traditional and "modern" students differ. Two classes of freshman composition will be involved in the study; one group will be experimental, and one will be controlled.

_____. "Word Processing in College Composition: Round Table Discussion Group Number 6." ICCH: Unpublished Report, 1983.

During Spring Semester 1983, Mr. Freese taught two sections of English 101--one in the traditional mode and one with word processors. In the word processing classes, he observed these positive aspects: 1)students were more actively involved in learning, 2)they did more revising and proofreading, and 3)the instructor was more involved with the student and his writing. However, the number of computers, the problems with schedules, and the performance of the computer and software hindered students' learning. They anticipated several changes for the next academic year: increasing the number of word processing classes, requiring students to have typing experience, involving more faculty, exploring software for tutoring, and extending word processing to other classes. For those planning word processing programs, Freese and Adams suggest cooperative efforts among faculty and thorough reading about the computer and compostition.

Golub, Lester S. "Some Criteria for Selecting Microcomputer Courseware for the Teaching of English." The Computing Teacher, 10, No. 2 (October 1982), 28-29.

Mr. Golub expresses concern that software for English classrooms is barely adequate and English teachers do not have time to develop their own. To assist teachers in making wise selections, he suggests several criteria: software should 1)be free of technical errors, 2)reflect current curriculum content, 3)encourage students to think, 4)provide students with simulations and similar activities, 5)provide positive reinforcement, 6)include diagnostic-prescriptive features, 7)allow for teacher modification of the program, and 8)provide supplemental materials.

Hertz, Robert M. "Problems of Computer-Assisted Instruction in Composition." The Computing Teacher, 11, No. 2 (September 1983), 62-64.

Hertz discusses some of the problems of CAI. For example, a computer cannot evaluate an essay on a specific topic unless it has been programmed to do so. Even checking spelling is a problem: a computer will pass both knew and new if they are in the program's dictionary. He calls Writer's Workbench a critic but says that it cannot judge between sense and nonsense. It can detect passive voice, but it cannot determine if the passive voice is better than active in a particular situation. Hertz is concerned that computer detection of elements of style will ultimately cause all writers to have one style. Although he believes that "writing should be taught by a teacher and not by CAI" (64), he recognizes that the computer is useful as a tutor.

Hocking, Joan and Cheryl Visniesky. "Choosing a Microcomputer System: A Guide for English Instructors." College Composition and Communication, 34, No. 2 (May 1983), 218-220.

This brief article offers basic guidelines for selecting computers and software for the English classroom. In addition, the authors include a list of questions to ask vendors during demonstrations.

Hubbard, Frank. "Teaching Invention on the Word Processor." Unpublished Manuscript. University of Wisconsin--Milwaukee, 1983.

After reviewing the types of CAI and various theories of writing, he describes an experiment he conducted during the summer of 1983. Sophomore students enrolled in a writing class to improve their style worked with word processors during two of the five class meetings per week. Instead of doing assigned writings, students did a variety of personal and school-related writing tasks. Written comments from the students revealed that the pace of the computer and the ease of correcting errors allowed students to compose more freely and to edit and proofread more carefully than they would have done in the traditional mode.

Jobst, Jack. "Computers and Essay Grading." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 309-310.

He did a pilot study using the computer to grade papers and discovered that students preferred computer comments over hand-written comments. He typed in comments as he read essays, and the computer kept count of errors and grades. He concluded that the teacher was able to give more motivating comments through the computer. A survey showed that 71% of the 96 students preferred computer-assisted comments because the comments were easier to read and the final copy was clean. However, grading papers with the computer did not save time: in fact, the average time per paper was 20 minutes.

Joyce, James. "UNIX Aids for English Composition Courses." Computing in the Humanities, 5 (1982), 33-38.

While writing computer programs and writing compositions share some common aspects, Mr. Joyce discusses one significant difference. Students get feedback from the computer when they write programs, but they often do not get feedback from instructors when they write compositions. He says students should be able to use computer programs such as Spell, Diction, Style, and a vocabulary list (all developed at Bell Laboratories) to indicate weaknesses in their papers. Then students could decide what corrections and revisions to make before submitting their papers for evaluation.

Kennedy, Patricia H. "Selecting Computer Software for a High School English Course." English Journal, 72, No. 7 (November 1983), 91-92.

Using computers effectively in the secondary English classroom is often limited by money budgeted for hardware but not for software and by inadequately developed software especially for upper level classes. Ms. Kennedy offers helpful guidelines for selecting programs: read articles about software, review software before buying, know its versatility, and look for authoring capabilities and entertaining formats. For tutoring secondary students with special needs, she recommends Magic Spells, Sentence Diagramming, and Vocabulary Skills--all for the Apple.

Kiefer, Kathleen E. and Charles R. Smith. "Textual Analysis with Computers: Tests of Bell Laboratories' Computer Software." Research in the Teaching of English, 17, No. 3 (October 1983), 201-214.

At Colorado State University, four classes of college composition students--two CAI groups and two control groups--took part in a study using Diction, Suggest, Style, and Spell from Bell Labs. Students in the CAI sections spent one hour per week entering and revising the last draft of their essays; they ran the programs in the following order: Spell, Diction, Suggest, and Style. The researchers used pre- and post-tests and attitude surveys to determine results. Objective tests revealed that "students in the experimental sections identified significantly more errors than those in the control sections" (206). Summary-and-Response Essays indicated that all classes made gains in fluency, but that CAI classes were not significantly more fluent than the non-CAI classes. The attitude surveys showed students to be in favor of interactive editing.

Kline, Edward. "Computer-aided Review Lessons in English Grammar and Spelling." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp.329-332.

Between 1975 and 1980, the University of Notre Dame developed computer-assisted review lessons in grammar and spelling. These lessons were designed to improve students' skills and to free the college instructor to teach writing strategies. The modules follow a simple format: "one principle of grammar, punctuation, or spelling is presented at a time and each principle is exemplified" (330). To discourage guessing, correct and incorrect responses are followed by explanations.

Since 1976, this program has been used at Notre Dame and at over 500 secondary schools and colleges. Thirteen thousand freshmen have used it; surveys show that 80% of those who responded said that the review lessons had helped them become better writers.

Kotler, Lorne and Kamala Anandam. "A Partnership of Teacher and Computer in Teaching Writing." College Composition and Communication, 34 No. 3 (October 1983), 361-367.

RSVP (Response System with Variable Prescriptions) allows teachers to give individualized feedback to students in the form of computer-generated letters. After students write essays, teachers read and rate them using four specific levels. Three levels are designed so teachers can select the most serious errors for prescription; then they fill out computer cards, and the computer produces individual letters for the students. The fourth or primary level requires the teacher to mark all errors so the computer can select a student's most severe problem to be addressed in the letter. The letters emphasize difficulties in communication, present correct models, and suggest ways to rewrite doubtful phrases. The program was field-tested in May of 1979.

Leahy, Ellen K. "A Writing Teacher's Shopping and Reading List for Software." English Journal, 73, No. 1 (January 1984), 62-65.

This article has limited value because it seeks to describe and discuss software available for English classes from middle school to college. She does include a shopping list, a list of places to write to for computer software. However, she fails to state that programs are rarely interchangeable between systems.

Levy, Lynn B. and Kentner V. Fritz. Status Report on the Computer Grading of Essays. ERIC ED 069 759.

This 1972 article is historically significant because it traces the evolution of grading essays with the aid of a computer. The authors summarize work done by the following: Ellis Page (1966, 67, 68), Arthur Daigon (1966), Jack Hiller and colleagues (1969), Henry Slotnick (1971), and Thomas Knapp (1972).

Marcus, Stephen. "Compupoem: A Computer-Assisted Writing Activity." English Journal, 71, No. 2 (February 1982), 96-99.

Compupoem asks the writer to produce specific kinds of words, such as adjectives and nouns, in a particular order. Computer prompts gradually elicit a poem from the writer. He calls it a "laboratory exercise in planning ahead" (98). When he invited colleagues to run the program, he observed attitudes of both meditation and anxiety. So he decided to make some changes in the program.

_____. "Computers and the Poetic Muse." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 406-408.

Marcus has updated his work on Compupoem. It now has an Advice Option Menu which encourages the writer to copy the original poem and then experiment with several options so he can select the final version from a series of attempts. Students report that the program helps them plan ahead and makes them consider unity and coherence.

Monahan, Brian D. "Computing and Revising." English Journal, 71, No.7 (November 1982), 93-94.

Mr. Monahan, who teaches high school in New York, used the TRS-80 to teach revision. Students had access to computers for five consecutive days and then for one day per week for the rest of the semester. During the first five class periods, each student wrote an essay in class, typed it into the computer, made mechanical corrections, printed a copy, expanded the paper, and learned how to insert blocks of information. For the remainder of the semester, students continued to do in-class writing, to input drafts, and to revise. He reached the following conclusion: "My observations of the revisions suggested that students may make more revisions and make them at a higher level when using word processors then when using pen and paper" (94).

Nold, Ellen W. "Fear and Trembling: The Humanist Approaches the Computer." College Composition and Communication, 26, No. 3 (October 1975), 269-273.

Humanists should create programs that stimulate thinking as opposed to those that offer mere drill and practice. Ms. Nold describes her programs to create poetry and to stimulate ideas for persuasive and argumentative papers. This article relates theory to practice.

Oates, William. "An Evaluation of Computer-Assisted Instruction for English Grammar Review." In The PLATO System and Language Study, Special Issue of Studies in Language Learning. Ed. Robert S. Hart. ERIC ED 218 930.

Mr. Oates studied the effectiveness of grammar and usage programs selected from PLATO. In two classes teachers used CAI to supplement classroom writing, but they did not teach grammar. In the non-CAI class, the instructor went over individual problems during conferences. All students were given pre- and post-tests to determine the effectiveness of the programs. While the mean score for the CAI groups increased by twenty points, the score for the non-CAI group fell two points. Thirty-five students in the CAI classes completed attitude questionnaires: they clearly preferred PLATO over traditional methods of grammar instruction. Mr. Oates believes programs like PLATO are important to college composition because instructors do not have time to teach grammar.

Peterson, Bruce T., Cynthia L. Selfe, and Billie J. Wahlstrom. "Computer-Assisted Instruction and the Writing Process: Questions for Research and Evaluation." College Composition and Communication, 35, No. 1 (February 1984), 98-101.

The authors present criteria for choosing software, questions for testing its effectiveness, and procedures for making evaluations. The article covers issues important to teachers of process-oriented compostion courses.

Powers, Richard S. "Computer-Assisted English Instruction." In Education in the 80's: English. Ed. R. Baird Shuman. ERIC ED 199-762.

Mr. Powers discusses facts and myths about the computer in the English classroom. He calls the computer a drillmaster, an illustrator, a challenger--in effect, a teacher's tool. Because the computer utilizes different approaches and programs, it has the potential to help students change from passive to active learners.

Pufahl, John. "Response to Richard M. Collier, 'The Word Processor and Revision Strategies.'" College Composition and Communication, 35, No.1 (February 1984), 91-93.

Pufahl criticizes Collier's methodology while studying revision strategies of writers using word processors.

Pufahl takes issue with the purpose of the Friday revision sessions, the limited time devoted to revision, the assumption that students would do global revision when working with a computer, and Collier's failure to intervene in the revision process. (See Collier. "Reply....")

Raye, Carol L. "Writer's Workbench System: Heralding a Revolution in Textual Analysis." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp.569-572.

Writer's Workbench, designed at Bell Laboratories, is a set of computer programs to aid the writer during composing and editing. Ms. Raye provides an informative overview of the proofreading, stylistic analysis, usage, and utility programs.

Rodrigues, Raymond J. "The Computer-Based Writing Program from Load to Print." English Journal, 73, No. 1 (January 1984), 27-30.

Mr. Rodrigues briefly discusses Helen Schwartz's program for writing a literary essay, his program (developed with Dawn Rodrigues) for prewriting, and Writer's Workbench. While he advocates using the computer to teach composition, he explains that most programs have been developed at universities and are not available to high schools. Consequently, there is a need to make such programs accessible to secondary teachers; potentially, this could be done by printing programs in professional journals.

Rodrigues, Raymond J. and Dawn Wilson Rodrigues. "Computer-Based Invention: Its Place and Potential." College Composition and Communication, 35, No. 1 (February 1984), 78-87.

Current computer-based invention programs promise to be more helpful to students than traditional ways of teaching invention. The authors review William Wresch's program to outline ideas, Helen Schwartz's algorithms for literary topics, Hugh Burns' open-ended inquiry, and their own creative problem-solving program. They also offer suggestions for developing invention programs and for conducting research.

Schwartz, Helen J. A Computer Program for Invention and Audience Feedback. ERIC ED 214 177.

Ms. Schwartz discusses the theory, field-testing, and preliminary results involved in using computers to prepare students to write essay exams in a literature class. Following the theories of Thomas A. Dwyer and her own experiences as a student, she developed SEEN (Seeing Eye Elephant Network), a program that uses a heuristic to stimulate thoughts about a character analysis. During the fall semester of 1981, she field-tested the program in an introductory world literature class: 40 students were enrolled in the CAI section and 40 in the non-CAI section. Her hypothesis was that "students would improve their essay writing after using the CAI program" (6). Although the CAI class did better than the non-CAI class on essay exams, the differences were not significant. When she prepared this paper for the Conference on College Composition and Communication held in March, 1982, she did not have a thorough statistical analysis completed.

_____. "Hypothesis Testing with Computer-Assisted Instruction." Educational Technology, 23, No. 10 (October 1983), 26-27.

Her program SEEN allows students to test a hypothesis about a literary character by using a tutorial, notices, and print-outs. The tutorial prompts students to make an hypothesis about a character, support it with evidence, and test it with exceptions. When students finish the tutorial, they post a notice on the electronic bulletin board. These notices allow them to read each others work and to comment on it. Finally, students can print out both their own notes and the comments made by others. The field-test she did is also described in her ERIC report. (See Schwartz. A Computer Program....) Following the field-test, responses to questionnaires implied that students internalized the tutorial's questions and read literature with more awareness.

_____. "Monsters and Mentors: Computer Applications for Humanistic Education." College English, 44, No. 2 (February 1982), 141-152.

Ms. Schwartz discusses the strengths and weaknesses of four types of computer programs--drill and practice, text feedback, simulations, and tutorials. She calls for creative programs that will stimulate thinking and offers a five-point checklist for evaluating composition software.

_____. Teaching Stylistic Simplicity with A Computerized Readability Formula. ERIC ED 196 014.

To find out if computerized feedback would help students develop a stylistic simplicity appropriate to their audience and purpose, Ms. Schwartz used STAR (Simplified Test Approach for Readibility) to conduct an experiment with two business-technical writing classes. Students in both classes did the same readings, writings, and activities. However, students in one class received quantitative feedback on the stylistic problems in their writing while those in the other class did not. The first assignment for both classes was treated as a pre-test. Students in the CAI class, received feedback information on their next four assignments. Statistical figures show that the CAI group learned more about stylistic simplicity than the non-CAI group. However, she does not consider the results conclusive because an artificial gle (grade level equivalent) was created by certain types of errors.

Schwartz, Mimi. "Computers and the Teaching of Writing." Educational Technology, 22, No. 11 (November 1982), 27-29.

To use the computer effectively in composition classes, instructors must consider modern theory and interactive computing. In the new paradigm--the writer discovers his meaning while writing--revision is an essential part of the composing process. By observing what students do and how they feel, Ms. Schwartz has found that most of them still see revision as punishment for making errors. Under Professor John Mulvey, a group of engineering students used computers to write and share research. Interviews revealed several positive attitudes: students accepted criticism more readily, felt more objective about their own writing, and gained confidence about their ability to revise.

Smith, Charles R. and Kathleen E. Kiefer. "Using the Writer's Workbench Programs at Colorado State University." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 672-684.

Writer's Workbench, designed for professional writers at Bell Laboratories, was adapted for composition classes at Colorado State University. This paper describes the various programs and provides sample print-outs. The authors believe this type of software can be developed for primary and secondary English students.

Van Pelt, William V. "Another Approach to Using Writer's Workbench Programs: Small Class Applications." In Sixth International Conference on Computers and the Humanities. Ed. Sarah K. Burton and Douglas D. Short. Rockville, Maryland: Computer Science Press, 1983, pp. 725-729.

To understand the effects of computer-assisted text feedback on the writing progress of students, Mr. Van Pelt incorporated four Writer's Workbench programs (Spell, Diction, Explain, and Style) into a small technical writing class. Students used the programs to analyze their writing and brought the results of Diction and Style to workshop sessions. While students made immediate gains from Spell, they needed to learn the significance of the information provided by Diction, Explain, and Style. Class lectures and group workshops helped students understand and evaluate the computer's responses so they could revise their papers. For those students who became obsessed with local revision, peer comments and the instructor's advice helped them refocus their attention. He advocates a combination of group interaction, student-teacher dialogue, and text feedback. Finally, he offers many questions that need to be addressed in further studies.

Withey, Margaret M. "The Computer and Writing." English Journal, 72, No. 7 (November 1983), 24-31.

Ms. Withey discusses the various kinds of CAI and describes some programs curently in use in universities and colleges: PLATO, RSVP, and Hugh Burns' invention program. She advises secondary English teachers to be aware of the state of the art and to consider quality, content, and compatibility when selecting software.

Wittig, Susan. Three Behavorial Approaches to the Teaching of College-Level Composition: Diagnostic Tests, Contracts, and Computer-Assisted Instruction. ERIC ED 099 887.

Since most college freshmen are required to take composition, the English faculty at the University of Texas developed a course in 1974 to individualize instruction. Using the results of diagnostic tests, instructors designed individual contracts that addressed sentence, paragraph, and essay objectives for each student. Using computer modules and working at their own pace, students aimed for competency in each area.

Evaluations by students showed that they were in favor of the individualized instruction. However, skill competency did not transfer to their writing.

Womble, Gail G. "Process and Processor: Is There Room for a Machine in the English Classroom?" English Journal, 73, No. 1 (January 1984), 34-37.

Ms. Womble was asked to test word processing in her high school classroom with one computer for thirty students. Her article focuses on the writing and attitudes of three students. During interviews, these students said they considered word processing valuable. (They had computers at home.) She concluded that these students worked on revision because it was easy to move text and correct errors.

Wresch, William. "Computer Essay Generation." The Computing Teacher, 10, No. 7 (March 1983), 63-65.

Essay Writer asks the student to state his topic and to select an approach (one of four choices). Then the computer prompts the student to list and explain the major attributes of his subject and to select a mode of discourse (argumentative or descriptive). When the student is finished, the computer writes an essay which the student can print out and then revise. When he wrote this article, he was attempting to improve the program.

_____. "Computers and Composition Instruction: An Update." College English, 45, No. 8 (December 1983), 794-799.

As the title implies, this is an update of programs and research. He reviews Helen Schwartz's SEEN, Writer's Workbench, Ruth Von Blum's WANDAH, Cynthia Selfe's Wordsworth II, his own Essay Writer, and research by Collette Daiute, Lillian Bridwell, and Donald Ross.

_____. "Computers in English Class: Finally Beyond Grammar and Spelling Drills." College English, 44, No. 5 (September 1982), 483-490.

Mr. Wresch differentiates between types of CAI programs: drill and practice, tutorials, and dialogue systems.

After explaining in detail how drill and practice and tutorials work, he advocates using them only for remediation. According to Mr. Wresch, the future of the computer in the composition classroom involves dialogue systems (interactive programs). He then briefly reviews the work done by Ellis Page, Robert Bishop, and Hugh Burns.

Zoller, Peter T. Composition and the Computer. ERIC ED 127 611.

In 1972 at the University of California--Riverside, approximately one third to one quarter of the freshmen needed remedial composition work. When the Academic Senate recommended CAI, Mr. Zoller conducted a pilot program. Fifteen students spent one hour a week using drill and practice programs in a lab with a tutor and met once a week for a two-hour writing workshop. Student evaluations were focused on attitudes: universally, students liked CAI because they were actively involved in learning, not merely listening to instruction. He did not indicate whether they improved in their writing because of the CAI.